



DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
47123 BUSE ROAD, UNIT # IPT
PATUXENT RIVER, MD 20670-1547

IN REPLY REFER TO

NAVAIRINST 13800.12B
PMA251
3 Nov 97

NAVAIR INSTRUCTION 13800.12B

From: Commander, Naval Air Systems Command

Subj: CERTIFICATION OF EXPEDITIONARY AIRFIELD AM-2 MAT
INSTALLATIONS, AIRCRAFT RECOVERY EQUIPMENT, VISUAL/OPTICAL
LANDING AIDS, AND MARKING/LIGHTING SYSTEMS

Encl: (1) Expeditionary Airfield Mat Installations, Aircraft Recovery Equipment,
Visual/Optical Landing Aids, and Systems Requiring Certification

1. Purpose. To establish procedures and delineate the responsibilities for the inspection and certification of expeditionary airfield (EAF) mat installations, aircraft recovery equipment, visual/optical landing aids, and marking/lighting systems.
2. Cancellation. This instruction supersedes NAVAIR Instruction 13800.12A of 8 June 1994. Since this is a major revision, changes are not indicated.
3. Scope. This instruction applies to all expeditionary installations, regardless of size, which use any of the following EAF equipment: AM-2 mat, aircraft recovery equipment, visual/optical landing aids, and marking/lighting systems as listed in enclosure (1). It also applies to EAF equipment procured by or assigned to the United States Navy (USN), United States Marine Corps (USMC), or Department of Defense (DoD) contractors.
4. Background. The Commander, Naval Air Systems Command (COMNAVAIR) has overall life cycle responsibility for EAF installations, equipment, and systems. The requirement to provide the maximum attainable level of safety, and variations in airfield capabilities and missions have dictated a wide divergence in the configuration of EAF equipment and systems. To ensure EAF equipment and systems are installed, operated, and maintained properly, an associated inspection and certification program is required.
5. Certification. Certification is the procedure the Naval Air Systems Command (NAVAIR) uses to periodically verify, document, and issue technical assurance that EAF mat installations, aircraft recovery equipment, visual/optical landing aids, and marking/lighting systems are installed, configured, maintained, and operated in a manner supportive of safe aircraft operations. The following certification procedures are authorized:

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a. NAVAIR Certification. NAVAIR certification is the procedure whereby the Naval Air Warfare Center Aircraft Division, Lakehurst (NAVAIRWARCENACDIVLKE, Code 48J200) by direction of COMNAVAIR, certifies EAF installations, equipment, and systems by conducting inspections and issuing certification documentation. The NAVAIRWARCENACDIVLKE Expeditionary Airfield Service Unit (EASU) representative will conduct the required inspection and recommend certification. When NAVAIRWARCENACDIVLKE (Code 48J200) concurs with the EASU recommendation, certification is issued via naval message. A NAVAIR certification remains in effect for one year. For initial installations, drawings shall be submitted to NAVAIRWARCENACDIVLKE (Code 48J200) 30 days prior to installation for review and approval, illustrating the following information:

- (1) For an AM-2 mat expanse:
 - overall field layout including dimensions
 - mat lay configuration
 - anchoring and staking pattern
 - ground slope data.
- (2) For marking and lighting:
 - type and placement of marking
 - type and placement of all lighting assets.
- (3) For an M-21 arresting gear:
 - deck span
 - off-center dimension
 - type, quantity, and location of earth
 - anchors/stakes used.
- (4) For a Fresnel Lens Optical Landing System (FLOLS):
 - placement of the FLOLS in relation to the runway threshold
 - placement of FLOLS in relation to the touchdown point
 - elevation difference between the FLOLS and the touchdown point
 - elevation difference between FLOLS and the mirror sighting point 150 feet from the center of the middle cell.

b. Expeditionary Certification

(1) General. Expeditionary certification is the procedure whereby the Commander, Marine Forces Atlantic/Pacific (COMMARFORLANT/PAC) or his duly designated military representative issues certification documentation for EAF equipment or systems. Expeditionary certifications shall be performed to the same standards and criteria as NAVAIR certifications. Expeditionary certifications shall not be used to

circumvent or ignore the certification standards and criteria. The installation and certification inspection is the responsibility of the assigned Expeditionary Airfield Officer (EAFO) or the senior EAF Staff Noncommissioned Officer In Charge (SNCOIC) of the Wing/Group/Marine Wing Support Squadron. COMMARFORLANT/PAC shall determine who is qualified to conduct expeditionary certifications and the circumstances under which an expeditionary certification is warranted. NAVAIRWARCENACDIVLKE (Code 48J200) certification series documents will be used during the installation and certification process. All certification documents and drawings will be sent to the certifying command. An informational copy shall be sent to NAVAIRWARCENACDIVLKE (Code 48J200). Expeditionary certifications may be granted for training scenarios and contingency situations. The following guidelines must be adhered to for individual cases:

(2) Training. When an expeditionary certification is to be issued during a training scenario, the following procedures shall be followed:

(a) The EAFO/SNCOIC shall submit a request to conduct an expeditionary certification to COMMARFORLANT/PAC not later than 30 days prior to the requested certification date. The request shall include originator's grade, name, and primary billet. Drawings listed in paragraph 5a shall be included.

(b) The EAFO/SNCOIC, upon completion of the installation, shall submit a recommendation for certification message in the format outlined in paragraph 9 of this instruction.

(c) The EAFO/SNCOIC shall submit to the certifying command, within 30 days following the inspection, the completed inspection checklist and a formal technical report detailing the certification status and material condition of the installation, equipment or system, and corrective action recommended. An informational copy of all documentation shall be submitted to NAVAIRWARCENACDIVLKE (Code 48J200).

(d) An EASU representative shall be present to assist the EAFO/SNCOIC conducting the expeditionary certification. The EASU representative and the EAFO/SNCOIC must concur that all certification criteria have been met before release of the certification message. The message recommending certification shall include the name of the EASU representative present and state that he concurs with the certification recommendation. Expeditionary certification for training shall only be used for exercises less than 90 days in duration.

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(3) Contingency. When an expeditionary certification is to be issued during a contingency situation, the procedures listed in paragraph 5b(2) apply with the following exception: an EASU representative should assist in the expeditionary certification; however, EASU participation is not mandatory although highly recommended if available.

c. Interim Certification. Interim Certification is the procedure which grants temporary certification by the assigned on-site EAFO/SNCOIC or the EASU representative. An interim certification becomes effective upon the satisfactory completion of a certification inspection and remains in effect until expeditionary certification documentation is issued by COMMARFORLANT/PAC, or NAVAIR certification documentation is issued by NAVAIRWARCENACDIVLKE (Code 48J200).

6. Certification Requirements. All EAF mat installations, aircraft recovery equipment, visual/optical landing aids, and marking/lighting systems will be installed, configured, maintained, and operated per applicable Chief of Naval Operations and NAVAIR technical manuals, directives, and documents. Inspection and certification is required on all equipment and systems listed in enclosure (1). Procedures for properly performing and documenting the inspection of field marker lights (FMLs) installation are contained in NAWCADLKE-MISC-48J200-0020. Equipment and systems will be inspected and certified within 12 months (plus 30 days) of the previous certification. The additional 30-day extension is established only to accommodate training exercises. It is not to be construed as a 13-month certification period. NAVAIR inspection and certification requirements apply to the following situations:

a. After initial installation of the equipment, system, or facility, a relocation and subsequent reinstallation of any EAF equipment is considered an initial installation.

(1) When parts of an existing AM-2 mat airfield are removed for maintenance or repair actions and later reinstalled, the equipment does not require recertification until the next scheduled certification, provided each component is properly reinstalled in its original location and all hardware is installed in accordance with the applicable technical documents. If the airfield configuration is altered, including subgrade gradients and slopes, then the airfield must be recertified.

(2) When lighting and marking equipment is removed for maintenance or repair actions and later reinstalled, the equipment does not require recertification until the next scheduled certification, provided each component is properly reinstalled in its original location and all hardware is installed in accordance with the applicable technical documents.

(3) When an M-21 arrester engine assembly is removed and reinstalled or replaced, the M-21 arrester engine assembly requires recertification. Recertification of the entire M-21 arresting gear system is not required.

(4) When a previously certified FOLS is removed and reinstalled, it does not require recertification provided the FOLS is properly reinstalled at its original location and in accordance with the applicable technical documents. If the FOLS site is modified or relocated, a recertification is required.

b. If the Operational Commander elects to operate EAF installations, equipment, or systems that do not meet certification criteria due to operational necessity, he/she assumes full responsibility.

7. Certification Deviation. If during the planning of any EAF installation it is determined that applicable certification criteria cannot be attained, a request for deviation shall be submitted to NAVAIRWARCENACDIVLKE (Code 48J200) not less than 30 days prior to the scheduled certification inspection date. Each deviation request shall be reviewed on a case-by-case basis. If a deviation request is approved, the installation will be certified for the requested installation and certification period only. Approved deviations are not to be considered a policy change allowing automatic approval for future requests.

8. Responsibilities

a. Naval Air Systems Command Headquarters (NAVAIRHQ) Aircraft Launch and Recovery Equipment Program Manager (PMA251) has the technical responsibility for EAF mat installations, aircraft recovery equipment, visual/optical landing aids, and marking/lighting systems assigned to and installed at Naval Air Stations or Marine Corps Air Stations, EAF's, vertical takeoff and landing (VTOL) sites, vertical short takeoff and landing (VSTOL) air bases/facilities, and civilian airports/airfields.

b. The Deputy Program Manager, USMC Expeditionary Airfield Equipment (PMA251M) is responsible for assuring this equipment is installed, configured, maintained, operated properly, and periodically reinspected to ensure design performance characteristics are maintained. PMA251M is responsible for managing the certification program by:

- (1) Establishing certification policies, practices, and procedures.
- (2) Coordinating the development of certification requirements.

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(3) Integrating NAVAIR; Commandant of the Marine Corps (CMC); Commander, Space and Naval Warfare Systems Command; Commander, Naval Facilities Engineering Command; North Atlantic Treaty Organization; Air Standardization Coordinating Committee; Federal Aviation Administration; and DoD requirements into coordinated certification procedures and documents for use in the implementation of the program.

(4) Providing coordinated review of aviation facilities and equipment.

(5) Establishing safety requirements assuring all EAF equipment and systems are installed, functioning properly, and periodically inspected to ensure design performance characteristics are maintained.

(6) Granting, extending, or rescinding certification.

(7) Budgeting, coordinating, and providing administrative support and personnel for the total certification program.

(8) Budgeting for engineering studies, hardware development, and related tests for NAVAIR cognizant items to include equipment/systems improvements for integration into the EAF program.

(9) Providing technical assistance to the training commands for NAVAIR cognizant items to establish maintenance, operational, and personnel training and orientation programs.

c. NAVAIRWARCENACDIVLKE (Code 48J200) will administer the certification program by performing the following functions:

(1) Issue instructions, bulletins, and procedures to acquire data required for equipment/system certification.

(2) By direction of NAVAIR, issue NAVAIR certification to appropriate COMMARFORLANT/PAC for equipment and systems which have been formally inspected per this instruction.

(3) Issue instructions and procedures to organizational maintenance activities for recording the data necessary to enable issuance of expeditionary certifications by COMMARFORLANT/PAC.

(4) By direction of NAVAIR, withhold or rescind certification of equipment or systems not installed, maintained, or operated per applicable technical manuals and directives. When certification is withheld or rescinded, specific reasons for the action and required corrective action shall be provided.

(5) Provide EASU personnel to coordinate, schedule, and provide technical assistance to field commands concerning installation, repair, maintenance, and inspection of NAVAIR cognizant equipment listed in enclosure (1).

(6) Develop and provide necessary training, orientation, and certification qualification programs for operation and maintenance personnel.

(7) When requested, provide test programs and procedures for equipment/ systems listed in enclosure (1).

(8) Upon completion of a NAVAIR inspection of an EAF mat installation, equipment, or system as defined in enclosure (1), the EASU representative will:

(a) Request the inspected activity send the EASU drafted message containing certification/rescind recommendation.

(b) Provide the commander of the inspected activity or their designated representative with a Certification Status/Material Condition Report (CSMCR) which contains a complete list of deficiencies/discrepancies and the EASU's certification recommendation.

(c) Submit a formal technical report to NAVAIRWARCENACDIVLKE (Code 48J200) within 30 days following the inspection which details the certification status and material condition of the installation, equipment, or system, and corrective action recommended.

d. COMMARFORLANT/PAC and Naval/Marine Corps Air Station Commanding Officers

(1) Furnish the necessary support equipment, and trained and qualified personnel to operate EAF equipment or systems being inspected, and assist the EASU representative during the NAVAIR certification inspection process.

(2) Be responsible for the continued maintenance and readiness of all equipment and facilities in a safe, certifiable condition between inspections and certification.

a. Precedence. The precedence assigned to the message shall be consistent with operational urgency.

b. Distribution

(1) NAVAIR Certification

TO: NAVAIRWARCENACDIV LAKEHURST NJ//48J200/48J500MC//
INFO: CMC WASHINGTON DC//ASL45//
COMNAVAIRSYSCOM PATUXENT RIVER MD//PMA251M//
COMMARFORLANT//FEO// or COMMARFORPAC//FEO/EAF//
COMNAVAIRLANT NORFOLK VA//N433// (if applicable)
COMNAVAIRPAC SAN DIEGO CA//N435// (if applicable)
COMNAVSAFECEN NORFOLK VA//114//
OTHER COGNIZANT COMMANDS (as required).

(2) Expeditionary Certification

TO: COMMARFORLANT//FEO// or COMMARFORPAC//FEO/EAF//
INFO: CMC WASHINGTON DC//ASL45//
COMNAVAIRSYSCOM PATUXENT RIVER MD//PMA251M//
NAVAIRWARCENACDIV LAKEHURST NJ//48J200/48J500MC//
COMNAVSAFECEN NORFOLK VA//114//
OTHER COGNIZANT COMMANDS (as required).

c. Security Classification. As required.

d. Standard Subject Identification Code. //N13800//.

e. Subject. The subject line will include the phrase "REQUEST FOR NAVAIR CERTIFICATION" or "REQUEST FOR EXPEDITIONARY CERTIFICATION," as appropriate, and the type of EAF installation, equipment, or system nomenclature.

f. Contents. Provide necessary data to substantiate recommendation for issuance of NAVAIR or expeditionary certification, as appropriate. Include installation designation (EAF/facility/site), aircraft wing identification number, model identification, serial/system number, runway identification and distance from threshold, and other information deemed pertinent and necessary. Include the following statements in the certification request:

(1) NAVAIR Certification: "CONSISTENT WITH THE PROVISIONS OF REF ____ (NAVAIRINST 13800.12B), INTERIM CERTIFICATION REMAINS IN EFFECT AS OF THE CERTIFICATION INSPECTION COMPLETION DATE - _____, PENDING FINAL

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APPROVAL AND ISSUANCE OF CERTIFICATION DOCUMENTATION BY
NAVAIRWARCENACDIV LAKEHURST NJ (CODE 48J200)" and
"NAVAIRWARCENACDIV LAKEHURST NJ EASU REP (Name) RECOMMENDS
CERTIFICATION BE ISSUED."

(2) Expeditionary Certification: "CONSISTENT WITH THE PROVISIONS OF
REF ____ (NAVAIRINST 13800.12B), INTERIM CERTIFICATION IS IN EFFECT AS OF
THE CERTIFICATION INSPECTION COMPLETION DATE - ____, PENDING FINAL
APPROVAL AND ISSUANCE OF CERTIFICATION DOCUMENTATION BY
COMMARFORLANT/COMMARFORPAC" and "ON SITE SUPERVISOR (Grade,
Name, Unit, Billet) RECOMMENDS CERTIFICATION BE ISSUED. EASU REP (Name)
ASSISTED WITH THE CERTIFICATION AND CONCURS WITH CERTIFICATION
RECOMMENDATION."

10. Concurrence. This instruction has the concurrence of the Chief of Naval
Operations (N885F) and CMC (ASL45). Marine Corps activities will take action
prescribed herein unless specifically exempted by CMC.

11. Review. PMA251 shall review annually the contents herein and provide
recommendations for changes and deletions to COMNAVAIR.



J. A. LOCKARD

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EXPEDITIONARY AIRFIELD MAT INSTALLATIONS, AIRCRAFT
RECOVERY EQUIPMENT, VISUAL/OPTICAL LANDING AIDS, AND SYSTEMS
REQUIRING CERTIFICATION

1. Airfield Mat Installations and Related Mat Accessories. AM-2 airfield mat installations on which aircraft operate under their own power will require certification. Parking areas, hides, or the like where aircraft are towed and not operated under their own power do not require certification.
2. Aircraft Power Check Installation/(High Power Run-up Fixture).
3. Recovery Equipment. Type M, Mark 21 (M-21 arresting gear).
4. Landing Helicopter Assault Training Site.
5. Visual/Optical Landing Aids, Systems, and Equipment
 - a. Fresnel Lens Optical Landing Systems (FLOLS), Mark 8 MOD 0, to include FLOLS site/pad.
 - b. Expeditionary airfield marking and lighting for air operations.
 - c. Close-in approach indicator (CAI Mod 2).
 - d. Vertical/Short Takeoff and Landing, Optical Landing System (VSTOL OLS), Mk 11 Mod 0.
 - e. Horizontal approach path indicator.
 - f. Hover position indicator.
 - g. Airfield and vertical takeoff and landing/vertical short takeoff and landing operating area marking, lighting, visual landing aids, and systems for air operations.